

REMARKSSummary of the Official Action and Response

With this Response, Claims 1-28 remain pending in the case. Claims 1 and 20 have been amended. No new claims have been added and no claims removed.

In the Official Action, the abstract of the disclosure was objected to because of the inclusion of legal phraseology. The legal phraseology has been removed by amendment, and the abstract is now in a condition for allowance.

In the original application, Claims 1-28 were pending. Claims 1-21 and 26-28 were rejected under 35 U.S.C. 102(b). Claims 22-25 were rejected under 35 U.S.C. 103(a). The Examiner is requested to carefully consider the arguments presented below with respect to the rejected claims.

The Cited References Do Not Anticipate Any Claim Under 35 U.S.C. 102(b)

The Examiner has rejected Claims 1-21 and 26-28 as being anticipated by Relenyi et al., U.S. Patent No. 4,521,281. Applicants have amended independent Claims 1 and 20 to more clearly illustrate the shortcomings of Relenyi et al. as an anticipating reference and respectfully traverse these rejections and request reconsideration of the same.

In addition, amended Claim 20 has been amended to include the statement, "providing a composition comprising," which was inadvertently left out of the originally filed claim, and simply clarifies Claim 20 is a method claim.

Relenyi et al. teaches a particular class of iodonium ylide compounds useful in inhibiting the growth of microorganisms. The structure of forty-nine (49) separate example compounds, and the procedure for forming these example iodonium ylide compounds, is detailed within the Relenyi et al. reference. In addition, Relenyi et al. suggests some possible applications of the iodonium ylide compounds and some vehicles for the delivery of the iodonium ylide compounds.

However, the disclosure related to applications for the iodonium ylide compounds fails to teach the use of adjuvants and additives as claimed by Applicants to improve the efficacy of iodonium salts for use in numerous practical antimicrobial applications. Amended Claims 1 and 20 include, among other things, "a compound to render the composition compatible with a surface being treated, the compound selected from the group consisting of di-acids, acid anhydrides, polyfunctional acids, di-ethylene glycol, and resorcinol." The Relenyi et al. reference fails to teach the use of any of the members of this group.

One of the differences in the compositions taught by Relenyi et al. and those claimed by Applicants is now highlighted in Claims 1 and 20. The composition utilized in amended Claims

1 and 20 has been designed and includes a component specifically provided, "to render the composition compatible with a surface being treated." Specifically, the polyfunctional alcohol and polyfunctional acid moieties hold the iodonium to the surface of the substrate once the vehicle has evaporated. Reyenyi et al. does not teach or suggest such a carrier system for an iodonium salt containing composition.

Claims 1-21 and 26-28 have also been rejected under 35 U.S.C. 102(b) as anticipated by either of two references by Moyle, U.S. Patent Nos. 3,885,036 and 3,844,498. Similar to the Reyenyi et al. reference, the Moyle references also fail to teach components present in Claims 1 and 20, as amended.

The Moyle references are directed to a class of thienyliodonium compounds, and the use of these compounds as a microbial agent. Unlike Applicant's invention, the uses of thienyliodonium compounds described in the Moyle references focus, in large part, on soaps, detergents and shampoos. Other possible uses, such as to treat wood or soil, are given only passing mention, without specific reference to suitable adjuvants and additives.

As described above with respect to the Reyenyi et al. reference, amended Claims 1 and 20 include, among other things, "a compound ... selected from the group consisting of di-acids, acid anhydrides, polyfunctional acids, di-ethylene glycol, and resorcinol." This element is not taught by the Moyle references. This element of Claims 1 and 20 functions as a carrier for an iodonium salt and provides benefits beyond those taught by Moyle.

The composition of amended Claims 1 and 20 is beneficial over the cited prior art because the carrier system allows for the use of the iodonium compounds for diverse applications. The composition allows the active ingredient, the iodonium salt, to be delivered for such useful applications as water and air sterilization, nematode and fungi control, deterring mollusk attachment to submerged surfaces, deterring termite infestation, eradicating or minimizing Pierce Disease and other similar plant diseases, and controlling mildew and treating flooded homes with increased efficacy. (Pg. 4, lns. 1-16)

For these reasons, amended Claims 1 and 20 are not anticipated by the Reyenyi et al. or Moyle references, and notice to that effect is earnestly requested.

Claims 2-19 ultimately depend from amended Claim 1, and thereby add additional limitations to the base claim. Applicants respectfully request reconsideration of Claims 2-19 in light of the discussion and amendment of Claim 1 presented above. Likewise, claims 26-28 depend from amended Claim 20, and Applicants respectfully request reconsideration of these claims in light of the discussion and amendment of Claim 20.

In order for a reference to act as a § 102 bar to patentability, the reference must teach each and every element of the claimed invention. Kalman v. Kimberly-Clark Corp., 713 F.2d 760, 771 (Fed. Cir. 1983). Without the required teaching of "each and every element" as set forth in the claims, it is improper for the Examiner to continue such rejections under Section 102. Reconsideration is requested.

The Cited References Do Not Render Any Claims Obvious Under 35 U.S.C. 103

Claims 22-25 stand rejected as being unpatentable over either of the Moyle references as applied to Claims 1-21 and 26-28, and further in view of Hu et al., U.S. Patent No. 5,531,893. Applicants respectfully traverse these rejections and request reconsideration.

Each of the rejected claims is ultimately dependent from amended independent Claim 20, and necessarily includes each of the limitations of that claim. As described above with respect to amended Claim 20, Moyle fails to teach "a compound to render the composition compatible with a surface being treated selected from the group consisting of di-acids, acid anhydrides, polyfunctional acids, di-ethylene glycol, and resorcinol." The Hu et al. reference does not remedy this deficiency in the cited prior art.

The Hu et al. reference teaches an interpenetrating network, IPN, for removing contaminants. The IPNs of Hu et al. are a membrane of a homogeneous matrix of polyethersulfone, polyfunctional glycidyl ether, and a polymeric amine such as polyethyleneimine and like polyamines, and polyethylene glycol. (Col. 2, lns. 12-20).

Hu et al. does not teach the use of an iodonium salt and does not teach the use of a compound to render an iodonium salt compatible with a surface being treated. Therefore, the combination of the Moyle references with the Hu et al. reference does not teach every element of rejected Claims 22-25. Only the novel carrier system as claimed by Applicants makes it possible to usefully deposit and employ iodonium in a filter.

Even if the combination of the Moyle references with the Hu et al. reference did suggest each element of Claims 22-25, there is absolutely no motivation within the cited references to modify the IPN filter of Hu et al. to achieve the filter media of Claims 22-25. Only through the use of impermissible hindsight upon viewing Applicants' invention does the novel use of an iodonium composition, as presented in Claims 22-25, become apparent.

Therefore, Applicants respectfully request reconsideration of the claims, as amended, and withdrawal of the § 103(a) rejections at the Examiner's earliest convenience.

CONCLUSION

In view of the foregoing amendments and remarks, Applicants respectfully traverse any further rejection of the pending claims under 35 U.S.C. §§ 102(b) and 103(a), and request reconsideration of all currently pending claims. All claims are now considered to be in condition for allowance, and notice to that effect is earnestly sought at the Examiner's earliest convenience. If any informalities remain which can be corrected by Examiner's Amendment, the Examiner is requested to phone the undersigned attorney.

The Commissioner is authorized to charge any fees associated with this Amendment to Deposit Account No. 23-0280.

Respectfully submitted,

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I hereby certify that this correspondence is, on the date shown below, being deposited with the United States Postal Service as first class mail, postage prepaid, in an envelope addressed to: Mail Stop Non-Fee Amendment, Commissioner For Patents, P.O. Box 1450, Alexandria, VA 22231-1450 on November 14, 2003.

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